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SEARCHLIGHT ON CANCER

TREATED in time, most cases of cancer are curable. In some forms of the disease, nearly nine out of every ten patients can be saved.[1] Yet year after year cancer kills 70,000 people in England and Wales alone.

Why does so curable a disease rank second as a cause of death? Because, although patients treated early are twelve times more likely to recover than are those treated late,[1] only one out of every four seeking treatment comes sufficiently early,[1] and two-thirds die without any radical treatment.[2]

Sometimes the patient's doctor is at fault. The early symptoms are much more commonly due to less serious causes, and, misled by this, he may fatally delay the detailed investigations that would reveal the truth in time. But more often the patient seals his own doom: he too long ignores warning symptoms that should lead him to seek medical advice; or, dreading cancer, he deliberately puts off the consultation that might confirm his worst fears. So ignorance and fear are greater killers than the disease itself.

While the public is waiting for a miraculous cure, a less dramatic remedy is already at hand. In the United States of America, a five-year campaign of public education on the nature of cancer, its early signs and symptoms, and its curability has had most encouraging results. The killing delay in seeking medical aid has been halved;[3] the recovery rate raised by five per cent.[4] A similar result in England and Wales would mean an immediate saving of 3,500 lives annually. And over the years a more informed public attitude would steadily better that figure: in time we might even reduce the annual cancer death roll by 30,000[5] *without any new advances in medical treatment.*

A campaign of this type would have its dangers of course: wrongly directed, it could create a pathological dread of cancer, or at least accentuate it where it already exists. Based on hope, however, it could remove or reduce fear of contagion, mutilation, death. In any case, the continued unnecessary loss of so many lives is too great a price to pay for avoiding a delicate task.

It is for these reasons that the Central Council for Health Education is now considering a health education campaign against cancer.

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THE DOCTOR IN HEALTH EDUCATION

By Professor R. E. Tunbridge, O.B.E., M.D., F.R.C.P., *Professor of Medicine, University of Leeds.*

The quest of health is many centuries old but the science of health is still in its infancy. Professor A. N. Whitehead once said " The last thing to be discovered in any science is what the science is really about." The word health is of Old English derivation and means " wholeness " but the dictionary definitions invariably imply a negative quality such as absence of disease, or of disorder or of deformity. The problems of the science of health however are the problems of other sciences and should be approached along similar lines.

It is essential when undertaking any scientific study to investigate the general factors concerned and to review the field. For example when undertaking an economic survey particular attention will be paid to the factors concerned in wastage ; and when studying a disease to the factors responsible for morbidity.

A Preliminary to the Study of Health

In the study of health the morbidity or principal wastage factors are ignorance, indifference and misrepresentation. Ignorance may be considered under two headings, first, justifiable ignorance, due to lack of knowledge which may lead to inquisitiveness about the unknown and is productive of the true scientific outlook and, second, the ignorance due to laziness or unwillingness to become acquainted with established facts which is one of the obstacles to be overcome by an effective health education service. Indifference manifests itself in many guises. There is the expert who fails to bring new information to the attention of public opinion. The United Kingdom was very slow in adopting measures for the pasteurisation of milk and for the immunisation of children against diphtheria, due, in part, to the apathy of medical opinion and, in consequence, many lives were needlessly endangered and lost. There is also the personal indifference. If a man with venereal disease or active tuberculosis refuses to seek advice or, having sought advice, refuses to act upon it, he must inevitably expose his associates to the risk of infection. Misrepresentation, whether due to lack of knowledge or excessive zeal or self-interest, can be productive of much harm. The person who believes he can only be healthy by drinking many pints of cabbage water or by consuming large quantities of orange juice or by zealously adhering to similar fads, may so misrepresent the truth that the whole life of the

individual becomes misdirected and unnecessary hardships and illness may result, from which he could easily have been spared.

Approach and Technique

After reviewing the field the scientist then proceeds to select his particular method of approach and to apply a specialised technique. For example, in the case of diphtheria he might investigate the effects *in vitro* of certain nutrients on the growth of the organism or upon the formation of toxin ; or he might investigate the effects of antitoxin administration upon the incidence of complications ; or the conditions predisposing to the carrier state. In health education there are likewise many methods of approach and many techniques ; the written article, the lecture, the tutorial class, the radio talk, the use of films and posters and casual conversation. All have their place and their approach varies with the individual and with the locality. Further, a technique may be highly successful in the investigation of a problem in one area but quite unsuited for general use. The spraying of stagnant water with antimalarial agents may be a practical method of attack against malaria in, say, Central America, but it is quite unsuited for the conditions found in the Burmese hills. In another district the introduction of special animal life which will devour larvae is effective and yet, in other regions, the only method is to attempt to reduce the number of mosquito bites by the use of special garments, ointments and netting.

Need for a Balanced Outlook

Finally the scientist has to be careful not to generalise from results obtained using a specialised technique, and to realise that before forming a hypothesis he must take into account the results obtained by other workers. The laboratory worker not infrequently studies one particular reaction, having first removed the tissue or organism from its natural environment. Such isolation is rarely possible in the field of human investigation because the factors are both so numerous and so interrelated that it is almost impossible to obtain constant standard conditions. In health education the dangers of an unbalanced approach have been all too evident in the past. Nutrition for example has been much to the fore in recent years and, whilst there is considerable evidence that the scientific planning of our food supplies during the war years has been accompanied by a general improvement in the standard of nutrition in this country, it would be unwise to assume that the improved nutrition was entirely responsible for the improved health of the general population. We must be on our guard against fanatics who consider a particular problem such as the

eradication of venereal disease, the elimination of pulmonary tuberculosis or the widespread introduction of child guidance clinics as the essential need for the creation of an A1 nation.

The Role of the Doctor

The position of the doctor in health education is unique but his background is poor. In the past medical education laid too much stress upon disease, often in its grosser and more rare manifestations. Such emphasis was inevitable. In any science it is highlights which, by their very contrast, first attract attention and in this respect medicine is no different from any other science. The recent war, however, has done much to change the professional outlook. Contact with healthy men in varied environments has driven home to most Service medical officers the importance of environment in the prevention of all forms of sickness. The beneficial effects of specialised feeding and training in the development of low grade troops and the value of selection in deciding employment have been well publicised. It was, however, the daily contact of the Service medical officer with his men, and the necessity for the men to be fighting fit in order to perform their duties proficiently that stimulated the interest in what is called positive health. In the past the doctor has been very loath to discuss sickness, let alone health, with his patients. Such an attitude was the inevitable outcome of his earlier training because his knowledge of the grosser manifestations of disease, together with his knowledge of human nature and his realisation of the limitations of knowledge in his own subject, made it difficult for him to discuss freely the possible implications of the patient's disease. The public now realise that much of the professional reticence was not always either a cloak for ignorance or a desire to appear learned. An increasing number of lay people are anxious to know how to maintain health and expect to receive advice and help from the medical profession. The casual conversation of the doctor when visiting his patients plays an enormous part in the education of the general public in health matters. It is essential therefore that members of the profession should realise their responsibility, and the need for discretion in their answers to even the trivial questions asked by a patient either at the dinner table or at the end of a visit. The teaching profession and other educational organisations are very alive to the potentialities of health education and it is necessary for those in charge of medical teaching to orientate the student's training so that he may, by the time he qualifies, have an understanding of the importance of health to the individual and to the community, and be aware of his own responsibility to the community in attaining and maintaining the highest possible standard of health.

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SCIENCE OF BREAST FEEDING

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Whilst we have always known that the breast fed child was the best fed child, a time has nevertheless arisen when we should state the scientific facts on which our belief is founded.

It is particularly important that this should be done at the present time, for undoubtedly paediatricians, health visitors and the public themselves see children daily who are apparently thriving although they are not breast fed.

The old slogans which have been used in the past such as " Breast feeding is best because it is the natural way " and so on, no longer hold weight and fail to carry conviction. I have heard many a paediatrician state that he could tell the breast fed from the artificially fed child, but I very much doubt if he would succeed in this if he were really put to the test.

Again, the word " artificial " feeding must be very clearly defined for it does not mean one thing—it means many. An artificially fed child may be fed either on liquid cows' milk or on a dried milk mixture. The risks associated with the two are by no means comparable. One of the largest and most comprehensive comparative surveys between breast feeding and artificial feeding showed a great advantage in breast feeding but the babies under consideration were drawn from a mixed population in a poor area. The artificial feeding was liquid milk feeding, yet any child welfare administrator could have approximated the two results in some respects by changing from liquid milk feeding to dried milk feeding. Even in dried milk feeding there is considerable variation.

Breast or Bottle?

We all of us see babies thriving to-day on liquid milk and on various varieties of dried or condensed milk, and so do the mothers in the country. It is useless to say that if a baby is not fed on the breast it will not thrive. In the first place this statement is not true and in the second place the average mother will no longer believe you.

It is no longer any use to say that dentition is adversely affected by artificial feeding. Five years ago the opinion of several experts was sought on this point—experts whose opinion would be acceptable to

the most critical members of the dental profession, and who were nominated by them. Not one of them was prepared to say that breast feeding would ensure the formation of good dental arches or prevent dental caries. One stated that he was of the opinion that the disadvantages of artificial feeding insofar as dentistry was concerned had been exaggerated; another that there was no evidence that breast feeding would ensure good arches in good relation, and a third that clinical research indicated that the incidence of dental caries was only slightly lower in breast fed children than in those artificially fed.

Other experts were asked whether there was any truth in the statement that breast feeding prevented uterine sub-involution (failure of the womb to return to its normal size). The results of this enquiry were very interesting. In the first place it was obvious, since a big percentage of women do not feed their babies, that if the statement were true there would be a large number of women in the country suffering from this condition, and this we know not to be a fact. One of the experts doubted the existence of sub-involution as a real entity, whilst others were unable to produce any evidence that there was any connection between the absence of breast feeding and sub-involution.

Psychiatrists were also questioned—is the breast fed child better qualified mentally to face life than the artificially fed child? Is there a closer link between the mother and child when the baby is breast fed? The psychiatrists would go no further than to state that they believed that the breast fed child was physically healthier than the artificially fed child, and that as physical health was a contributory factor to mental health, to that extent the breast fed child was mentally more stable. An interesting view was expressed that the artificially fed child, being less reliant on its mother in the early months of life, would have a more independent and pioneer spirit and view. It was generally agreed that it was not breast feeding in itself that created a closer link between mother and child but rather the desire to breast feed and to do everything possible for the child.

Convincing the Public

It will be seen that the lines of investigation already considered have drawn a blank, yet if propaganda is to be of value, if the public are to know why breast feeding is best, it is only the truth in the end that will count. The well worn slogan that breast feeding is best feeding carries no conviction to the mother struggling to feed her child with some difficulty when she sees her sister opening a tin to feed a thriving and apparently healthy baby. Possibly the worst slogan of all is that breast feeding is cheapest. It is the worst slogan because no mother will desire

to feed her baby on the breast because it is cheapest. She will undoubtedly associate the word " cheapest " with the most inferior, and in actual fact it is doubtful if breast feeding is cheapest. One has to remember the various subsidies which are provided for the artificially fed child, be it wet milk or dried milk, and against this one has to balance the fact that if a mother is to feed her child on the breast successfully she needs a full quota of milk, a full share of the meat ration, such eggs and cheese as can be obtained and vegetables at a time when the cost is high.

Something more is required than cheap, worn out slogans, which are unconvincing and untrue, and there are advantages in breast feeding which are overpoweringly convincing and scientifically proven and true.

Let us see what these are.

Scientific Facts

Every paediatrician will tell you that the majority of babies brought to him with serious feeding troubles are those that are artificially fed, whilst the difficulties arising in the breast fed child are usually overcome with a little simple advice and help. The paediatricians will go further. They will tell you that when you get an outbreak of diarrhoea among the babies in an institution, the epidemic is almost always limited to those artificially fed. The few cases that occur amongst the breast fed babies will occur in those whose breast feeding is only partial and it is interesting to note that amongst them the mortality is low.

Let us look at some other factors of importance.

Summer diarrhoea in a baby is often followed by bronchitis and pneumonia in the winter. Recovery from respiratory infection in babies is more frequent in the breast fed child than in the artificially fed child. Alimentary and respiratory infections in babies are important causes of infant mortality and already we see that this mortality is greater in the artificially fed child than in the breast fed child. We ask ourselves why.

Before I answer this question let me add two more known facts. A few babies tend to contract pyloric stenosis. This is a condition where the muscle at the end of the stomach contracts and the baby will invariably vomit its food. It is a serious emergency, often needing an immediate operation. Recovery is twelve times as frequent in the breast fed child as it is in the non breast fed child.

Finally let us consider prematurity. Prematurity is one of the largest contributory factors in infantile mortality. Paediatricians will tell you that if a premature child is to survive, the value of breast milk cannot be overrated ; so much so that if the mother's own milk is not available they will advise breast milk from another mother or from a pooled source known as a breast milk bank. What is it then that exists in breast milk

that is not found in artificial foods or cows' milk? It obviously is not something that makes babies bigger or more rosy looking or " obviously " more healthy. It is something that prevents them from contracting infection and enables them to resist and overcome that infection even when it does occur. It is something that the mother possesses and either is not possessed by the cow or is destroyed in preparing the milk for the use of the baby. It is in fact an immunity to disease which she passes to her child in her breast milk.

This is no question of guesswork ; it is proven by the facts I have set out above and is something well known to the veterinary profession.

Veterinary Experience

I think that in the past too little notice has been taken by us of the profound knowledge which this profession possesses on the subject of natural feeding.

Medical knowledge is bound to be somewhat empirical for one cannot experiment on human beings as one can on cattle. The veterinary profession deals with the question of milk production from a purely scientific point of view, and consultation has therefore proved very interesting. Here are some of the facts that have been elicited.

There is a general increase in milk production up to the fifth or sixth lactation, after which it gradually decreases. One might think at first that the decrease in the size of families in human beings has something to do with the decrease in the time that women are now able to feed their children. This may be so but there is another factor which one has to remember. The increase in the amount of milk a cow produces up to the fifth lactation is associated with the fact that at about this time the cow reaches maturity in growth. I remember one doctor being somewhat anxious to show that birth control was accounting for decrease in human lactation but the point could not be proved by an analogy with veterinary science for the reason set out above.

It is interesting to note that milk production in cows depends on diet in pregnancy and routine of milking and general herd management. Particular emphasis is placed on the last third of the period of pregnancy and during this time the diet of the cow has to be so balanced and adjusted that she is treated as though she was already giving milk. In other words the veterinary profession confirms the importance of adequate ante-natal feeding to secure proper lactation. Again, during lactation the food given is in direct ratio to the milk yield, the amounts and proportions of protein and starch being assessed on scientific calculations.

Another point stressed is the importance of an adequate quantity of

water for drinking purposes. Unless this is supplied water is drawn from the blood stream and the rate of milk secretion falls almost within a day.

Human and Animal Lactation

The routine of milking is important. It must be regular and properly conducted. The presence of strangers in the stall can upset the whole of one lactation in a sensitive cow. Any painful or feverish condition, or any shock upsets lactation, and when this occurs there is little that can be done to restore the cow's milk except the removal of pathological causes, or rest if the trouble be due to psychological causes.

It is easy to co-relate these facts to those which we know apply to human beings. It is probable that women do not feed their children on the breast so well in a hospital or in a nursing home as they do in their own homes, due to lack of privacy and the presence of strangers. Even at home women must not be disturbed whilst they are feeding their children. These are facts which, known to us by experience, are fully appreciated by the veterinary profession and scientifically applied.

Perhaps the most valuable evidence that comes to us from the veterinary profession is the importance placed on giving the calf the colostrum or early milk. This contains very important anti-bodies and if these are lost to the calf its resistance to infection or disease is lowered. This is confirmed by experience with many kinds of animals. Lambs, for instance, are born highly susceptible to dysentery. With the sucking of the early milk from the mother the lamb receives a massive amount of these anti-bodies and becomes fully protected against the disease. If it were deprived of the early milk it would most likely become infected with lamb dysentery and die, no matter how carefully it might be reared. Veterinary experts are absolutely convinced from evidence that there is no artificial way of rearing a calf which is better than or even as good as its mother's milk if the calf is to become a satisfactory breeding animal in the future. With substitute feeding, vigour and stamina are lower, and skeletal development and the quality of bone is poorer.

Milk production in cattle is a scientific and business process. Only by skilled management can a herd of cows be obtained producing milk in adequate quantity and quality, and it is interesting that the heredity factor in milk production is passed by the bull and not by the cow.

Here then are some of the real and scientific reasons why breast feeding is inherently best feeding. Breast milk provides : The right nourishment ; Immunity or increased protection from diseases often fatal to babies ; Ease of feeding ; Natural cleanliness ; Freedom from actual pathological germs ; The knowledge that the mother herself has provided her baby with its first instinctive demand upon her.

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A DIPHTHERIA IMMUNISATION ENQUIRY

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In 1942 the Committee for the Study of Social Medicine published the results of an enquiry into some of the major reasons for the comparatively poor response to the diphtheria immunisation scheme in England and Wales. Of a random sample of 3,860 mothers covered by the enquiry, 3,569 (92 per cent) had heard of the scheme. It was thus inferred that roughly nine out of ten urban working-class mothers knew about the immunisation scheme, so that the poor response was not due to mere ignorance of its existence.

Of the 3,569 mothers who had heard of the scheme, 56 per cent had done so through the school, 18 per cent through the child welfare service, 9 per cent from friends, neighbours and relations. Other sources, such as private doctor, district nurse, hospital ; radio ; newspapers ; direct circularisation by local authority ; public posters ; films ; nursery school, accounted for the remaining 17 per cent. The most activating of all the sources was the " private doctor, district nurse and hospital " group, for of 238 mothers who heard of the scheme in this way 54 per cent had all their children immunised. 52 per cent of those who heard of the scheme through the child welfare service had all their children immunised, and 48 per cent of those who heard of it through the school. The effectiveness of the other sources decreased in the following order: direct circularisation by local authority ; radio ; newspapers ; friends, neighbours, relations ; public posters ; films ; nursery school.

Publicity, National and Local

Since 1942, diphtheria immunisation propaganda has increased considerably and there can now be few people who have not at some time heard of the scheme. National advertising is mainly carried out by the Central Office of Information and the Central Council for Health Education through the media of the radio, the press and other publications, the cinema, and the poster hoardings.

Local education and propaganda is the responsibility of the Local Authority, and varies from district to district. In Newcastle upon Tyne, a considerable amount of local work has been carried out. By means of an annual competition organised by the Health Department, the Newcastle upon Tyne Photographic Society co-operated in the preparation of photographs for advertisements inserted regularly in the local press. Cinema slides, prepared locally, have been shown regularly in certain of the cinemas in the more densely populated parts of the City. Posters have been displayed regularly both on outdoor and indoor notice boards. For this purpose, the Health Committee has put up a number of external display boards on Corporation properties in the City, and the Newcastle upon Tyne Co-operative Society Ltd., and other large undertakings, have had notice boards erected within their shops. Leaflets have been distributed from child welfare centres and other Corporation departments, and from a central enquiry bureau in the Health Department.

In addition, the following direct methods of approach are employed. Through the schools—by written appeal to the parents of school children. Through child welfare centres—by personal appeal to the mothers attending the clinics. By health visitors, in their routine visiting of the homes of children under school age. By direct circularisation—the birthday greetings card issued by the Central Council for Health Education is sent to every child in the City when it reaches the age of one.

In 1942, a very successful diphtheria immunisation campaign was carried out in Newcastle upon Tyne, but in subsequent years similar campaigns did not show the same results. This inferred that steady and continuous propaganda and education should be aimed at, rather than an annual campaign which, even if moderately successful, tends to disorganise regular clinic sessions by an influx of applicants.

The Newcastle Enquiry

To discover the relative success of the various avenues of approach, it was decided to carry out an enquiry over a year from 10th November, 1945, into the reasons why mothers brought their children for immunisation. The enquiry was limited to the mothers of children between one and five years of age who attended the diphtheria immunisation clinics, whether or not the child completed the full course of immunisation. This enquiry differs from that carried out by the Committee for the Study of Social Medicine in 1942, in that it was restricted to mothers who actually brought their children for immunisation, and gives no account of the reasons why other mothers did not. Secondly, it does not include school children, as it is felt to be more important to immunise children of pre-

school age, and the results so far obtained amongst school children are relatively satisfactory. Thirdly, this survey does not presume to be a detailed statistical study, but is more of a rough assessment of the reasons why mothers in Newcastle upon Tyne have their children immunised against diphtheria.* The results of the enquiry are given in the following table.

Source	Percentage of Mothers who brought children under 5 to Diphtheria Immunisation Centres
Health Visitor	32.9
General Knowledge	29.0
Greetings card on first Birthday	17.8
Child Welfare Centre (doctor or nurse) ...	11.7
Day Nurseries	3.9
Advertisements in press and other publications	1.5
Diphtheria in district	1.2
Radio Talks	1.0
Posters	.6
Cinema (slides and films)	.1
Private Doctor	.1

Relative Value of Methods of Approach

Only 3.2 per cent responded to indirect propaganda such as press advertisements, radio talks, posters, and cinema slides and films, which more than confirms the findings of the Committee for the Study of Social Medicine in 1942. There is, however, an important difference. It was found early in the present enquiry that a large number of mothers " just know " about the existence of the scheme. In 1942 large scale propaganda was comparatively new and no doubt at that time mothers would readily remember the source of their knowledge about diphtheria immunisation. Education and propaganda must have played a major part in the 29 per cent. of mothers who attributed their source of information to " general knowledge."

In 1942 direct circularisation by local authorities and nursery schools were relatively unimportant sources of knowledge of the scheme (accounting for 2 per cent and 0.5 per cent respectively). In the present enquiry, direct circularisation when the child reaches the age of one year, of the Birthday Greeting Card published by the Central Council

* The questioning of mothers was carried out by the staff of the diphtheria immunisation clinics, under the direction of the Medical Officer in charge, Dr. H. J. Hutchens.

for Health Education, accounted for 17.8 per cent of the attendances. Children referred from day nurseries accounted for 3.9 per cent.

The importance of the direct approach is shown in the attendances attributed to the health visitor's advice in the home, and to the doctors and nurses at the child welfare centres which accounted for 44.6 per cent of the total attendances. Only a very small number of mothers were referred by private doctors, but this is understandable as general practitioners in this City are allowed to carry out immunisation against diphtheria free of charge and debit the cost to the local authority. The presence of diphtheria in the district resulted in 1.2 per cent of mothers bringing their children for immunisation, and this may have stimulated others who attributed their attendance to some other reason. It is important to note that during the period under review three radio appeals were made, one on the 7th December, 1945, one on the 13th February, 1946, and another on the 24th May, 1946. On the 25th May, 1946, 29 mothers attributed their attendance to the broadcast on the previous day ; the other broadcasts appear to have had little effect.

Conclusions

It is clearly shown that the direct method of approach by health visitors, doctors and nurses at child welfare centres, nurses at day nurseries, and circularisation of the Birthday Greetings Card and follow up methods, are essential in securing a good response to the diphtheria immunisation scheme.

In the long term policy the maintenance and intensification of both local and national propaganda are as important as the highly organised and extensive methods adopted by commercial firms in the sale of their products. In this connection radio propaganda should be increased considerably, and periodic statements should be made to the press about the state of immunisation (a) in the country and (b) in the particular locality.

Finally, for the guidance of other local authorities, any original methods used in local authority areas where very successful results are obtained should be made known either through the Ministry of Health or through the Central Council for Health Education.

SUMMER SCHOOL IN SWEDEN

Most of our readers know that the Central Council for Health Education has for several years held residential Summer Schools in Health Education. So successful have these been that it is proposed to run a vacation school in Sweden in August, 1948, and those who are interested in the project are asked to write to the Medical Adviser and Secretary. Plans are not yet sufficiently advanced for any detail to be given but it would be helpful to hear from people who would like to have the opportunity of enrolling as students.

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THE OPEN-AIR NURSERY SCHOOL

By Miriam Lord, *Hon. Warden of the Margaret McMillan Centre, Bradford.*

The War Years revealed in startling clarity truths long hidden in the child-life of our great cities. Among the stream of children pouring forth into our countryside were found sections in every state of misery and neglect. Truths of their way of life, poor habitation, housing, their deplorably low standards of hygiene, broke on an incredulous British Public. From the roofs and housetops harassed doctors, teachers, nurses and social workers had long proclaimed these evils. Few listened. Forty years ago that great and inspired pioneer of child-health and education, the late Margaret McMillan had trumpeted forth the facts and some solutions. Few heard. Now at last the whole country saw and was ashamed.

Working in the heart of a London slum the sisters Rachel and Margaret McMillan had discovered that Clinics were not enough. Ill children poured through their Deptford Clinics at the rate of 6,000 a year. Something more fundamental was needed to stem such a torrent. The sisters toiled on and sought diligently for something preventive rather than curative. Then with the humblest of means and in the simplest way they erected in Deptford the first Open-Air Nursery School and Training Centre in the country. The results were startling but incontrovertible. In the words of Margaret McMillan, " The children cast their diseases like old garments and stepped forth in beauty arresting to the eye and heart." *The experiment was revolutionary in its very simplicity.* The work grew and became a centre of light and education to the neighbourhood. Margaret McMillan writes, " We found the germ of a tree." Now, at last, after more than 30 years, " the tree " begins to grow and spread. The germ has become a movement. Over the space of years there has been much experiment in every type and kind of nursery provision. None surpasses this original plan, nor have the principles been superseded.

The Nursery set in a Garden

The sisters McMillan planned their Nursery in a large space which they converted into a garden. They were surrounded and overlooked by the homes of their children. Mothers were near enough at hand eventually to form a little Community.

Space for free movement and activity is the first essential taught by

Margaret McMillan. The basis for good health is *nurture*, a wise nurture embracing body, mind and spirit, for they are inseparable. The Nursery should have the free atmosphere and security of a good home. "The least of schools and the best of homes," said Margaret McMillan. The child is a member of a family, a little community of children, staff and parents sharing a common purpose.

Experience of nursery workers proves that children who are well-nurtured thrive best in the open, under shelter; warm, but with free flowing air about them. There appears to be some vital principle, as yet undiscovered, in the effect of light and moving air upon the child's metabolism and resistance to disease. After some period in the open he seems protected, as with a nutritive sheath, against the inroads of disease and infection. The child gains in vigour and vitality even when he comes from a good home. Increased activity and circulation stimulates appetite and assimilation. The scanty hair of the poorly nourished child shows a new growth with the gloss and shine of health. Dry rough skins become smooth, and well-nourished subcutaneously, giving a glow of warmth and colour. Muscles begin to tone up and become firm and strong. Soon there is new bone formation. Teeth improve, rickets disappear in from twelve to eighteen months, anaemia vanishes. Equally astonishing, is the development in intelligence and new skills.

The nursery is a child-world filled with the fun, joy and laughter of little ones playing together in happy companionship. Joy releases vital energy and stimulates nerve centres. The child who is delicate, nervy, backward, sensitive or shy makes progress which delights his often harassed or anxious parents. This blossoming and unfolding of the children beneath our eyes constantly astounds afresh those of us who work with them and witness this ever-recurring 'child-magic.'

Water Play

The cult of the bath was well known to Greek and Roman Civilisations —so were the curative properties of massage and rhythm.

The bath, as planned by Margaret McMillan was not to cleanse the child (as is generally supposed) but for his education through the skin. Mothers are required to send their children clean, but if any require cleansing, this must be done separately.

Boys and girls are put in together. From the earliest years they accept sex differences quite naturally and healthily. This obviates difficulties which might arise later with the only or 'problem' child.

The babies love and delight in this water play. Even the most timid will eventually splash with the others. Play is followed by the stimulus of the 'shower' and a brisk rub-down with a warm towel. For the

delicate, nervy or rickety child, there is gentle massage all over the body (before the war with oil) and the mother is advised to continue this simple treatment at home. She learns that the child, however delicate, will not " catch his death " if he be given the daily bath summer or winter. Dressing and undressing for the bath give valuable opportunities for parent-training in clothing. Some children are too scantily clothed with buttocks left unprotected. Others are so tightly trussed in layers of clothing that they cannot breathe, and are found reeking in sour perspiration. Shoes are frequently too small or badly fitting.

When he leaves the nursery school, or even earlier, the average child is anxious and ready to learn to swim. One hopes that in future the swimming bath will be included as part of the equipment of every school.

Music and Rhythmic Movement

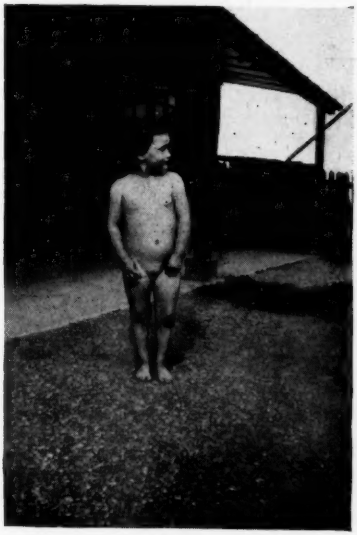
Music is the most popular activity of the nursery school and one of the most important. The health and curative possibilities of music on little ones of only two to five years old came as a revelation to those of us who pioneered the first flight of nursery schools twenty-six years ago. With no precedents, we found the way by watching the child and his line of interest. The child led, the teacher followed. Daily, summer and winter, with doors folded back, there were chosen periods for music and rhythmic dancing. These regular periods led to a marked effect on physique and posture. After a time, the little ones learned to move and walk with ease and grace. Where the teacher gave few directions the music talked, compelling the children to listen and leading to increasing powers of attention and concentration even in children so young. They became more alert and controlled in movement.

In some children with speech defects, there was an improvement in speech with better muscular and motor co-ordination indicating a stimulus to brain centres. The curative effect on sub-normal and maladjusted children, upon those physically or mentally retarded was often striking. Almost always the first definite step began in the period of rhythmic movement with a swaying of the body or movement of arms and hands. This would indicate a possible field of research as yet little explored. Where there is no compulsion, the child develops at his own rate. Nervous or backward children will often sit quietly to watch and listen. Inevitably they want to join in the fun. The companionship of happy normal children is sufficient stimulus to subsequent development at varying rates.

Another discovery was that almost all young children, girls especially, are musical, and after caring intimately for some thousands of young children I have yet to find *one* who is not rhythmic. The young child

Lilycroft Open air Nursery School (designed by Margaret McMillan)

Jean, aged 2. Rickets and malnutrition ; could not walk or talk



Jean,
aged 3 years 5 months

The Bath (designed by Margaret McMillan)

The only child finds a little sister

Dancing in the sunshine

shares with unspoilt primitive races that deep instinctive love of rhythm and urge to rhythmic movement so beneficial to vigour and good health. The child still retains the art of thorough enjoyment and gives himself wholly to the delight and joy of performance. Delight in music brings emotional satisfaction of psychological significance and importance to children of all ages.

Hygiene—Physical and Mental

The good nursery surrounds its children with an atmosphere of health. Well-nurtured in body and mind they develop a sound resistance to disease.

Food nicely cooked and served is eaten in pleasant companionship. Good appetite promotes digestion. The child learns to eat plain, healthy foods with relish and he who " cannot " eat forgets himself and eats with the rest. The ills and disturbances brought on by a wrong or badly balanced diet rapidly disappear. The child who lacks sufficient sleep is fretful, nervy, irritable. The regular daily sleep, especially refreshing in the open air, works marvels on his nervous system and subsequent development. In its internal management every good nursery promotes health by a high standard of cleanliness and a careful training in good habits. Parents marvel and often silently receive lessons in the individual personal care they see bestowed on each child ; in the patience shown to the ' problem ' or maladjusted child. The regular attendance of the medical officer reveals any defect at once and the co-operation of the parent is sought. Minor ailments are treated at the nursery school by the staff or nurse. There is regular record of height and weight and the medical schedule goes forward with the child. Thus each nursery becomes a small clinic to the advantage of children and parents and minor treatments are carried out regularly on the spot. This should be made possible in all our future schools and prove a boon to busy mothers.

Equally important are the principles of mental hygiene, and the formation of good mental habits in the earliest years. The child's whole nature and subsequent happiness can be profoundly affected by a right or wrong outlook on life. Habit is the basis of character, and habits of cheerfulness, self-reliance, courage in adversity, perseverance, good humour, truthfulness are best acquired in co-operation with companions of about the same age group in a happy environment. In the nursery school the child is one of a family—a little community living in close daily contact. The children serve and help each other in work and play, quite unconsciously learning habits for life.

Child companionship is invaluable, not alone for discipline but for satisfaction of the deeper spiritual needs in the child. For the lonely

child a new world of happiness opens up. The spoilt child learns to forget himself ; he has arrived at last at a place where things can go on without him if he chooses to have " tempers " or " sulks." The ' problem ' child is helped to new health and a different outlook step by step. Under the stimulation of a happy way of life all round him, there awakens a new inner desire to be good and happy and the will to try. Then follows effort. Praise, encouragement and love lead to further confidence through achievement and thence to control. His old besetting fears slip away like the sheath from the flower ready to open in full beauty.

Parent Training and the Home

" Train a man and you train a citizen. Train a woman and you train a family." Experience with parents over a wide field proves the universal need of preparation for their life-job of parenthood. Young parents learn by their mistakes, but the child is too precious for such costly experiment. Physical and mental health and sometimes even the life of the child is at stake for the want of simple knowledge. Accidents to the toddler in the home occur with alarming frequency. Parents are ignorant of the nature and instincts which drive him to touch, taste, investigate and experiment. The agonising cry of the young mother—"Oh! if I had only *known* "—is an indictment of an education which neglects to train its young women in child-care.

The function of the good nursery is to strengthen and supplement the home and co-operate with the mother in her job as parent. Some parents are ignorant of the very rudiments of child health and care and training in hygienic habits. Their children present a pitiable procession on entry. Their need is great. Others who may be well nourished and well shod and clothed have other needs. They reveal maladjustments due to mental or emotional stresses arising from wrong or unhappy home conditions. Noise, worry, quarrels or discord between the parents undermine health and stability. The child left unprotected is a child in continual fear ; the insecure child is a deeply unhappy child and psychological research affirms that neuroses in later life often have origins in these fears of childhood. Parents need to learn the importance of a wise, protecting love and elimination of fear in every form for the mental and spiritual health of their little ones. Thus the nursery which provides parent training fulfils a valuable service to child life and society.

Considerable opposition still comes from one section of the public who level the worn, threadbare charge that " the nursery school undermines parental responsibility." On the contrary—*the nursery school makes new demands* upon the mother who, in the past, may have been careless or

slack or neglectful. She sees new standards, new habits, and a better way of life. Courtesy and a respect for her personality help her to regain her own self-respect. Gradually she glimpses new horizons and often a new hope for herself and her family. Her child is the incentive, and brings happiness and a rich reward for effort. Moreover, parents help to train and educate each other in the social atmosphere of the good nursery-community.

A Hope for the Future

The idea of the provision of nurseries has been accepted by enlightened minds not only as a social but as a health and education service. When the significance of the principles of Margaret McMillan becomes fully appreciated we shall have open-air nursery *centres* throughout the land. The needs of the War and conditions brought about by the war years have given an impetus to the movement. The same principles carried throughout school-life could profoundly affect child-life and our cities. Moreover, from a health point of view there is a more widespread recognition of the importance of the early years in the child-life of our nation. Educational, psychological and medical researches have resulted in an enormous output of extremely valuable data and literature on every aspect of the early years. Education and health authorities are aware of the widespread needs in our complex society.

Margaret McMillan envisaged every nursery as a centre for parenthood and the training of young womanhood, a place of beauty, enlightenment and culture for a whole neighbourhood. Fellowship leads to understanding ; understanding to the great spiritual truth that we are indeed " members of one another." Is it too much to hope that a way of education which will prepare our children, from the earliest years, to the responsibilities of a civilised community may eventually lead them to the ways of peace? Then verily, " A little child shall lead them."

BIOGRAPHICAL NOTE

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THE POTENTIAL RHEUMATIC FAMILY

By May G. Wilson, M.D., *Associate Professor, Department of Paediatrics, Cornell University Medical College.*

At the present time rheumatic fever holds a prominent place in medical discussion and investigation. It is generally agreed that, although the nature of the disease is obscure, susceptibility of the host is the primary factor in the development of rheumatic fever. That this susceptibility is on an age and genetic basis is supported by considerable evidence.

For more than fifty years there has been a widespread clinical impression that heredity is a significant factor in the observed concentration of rheumatic fever in certain families. This belief was based in large measure on the observed familial incidence of the disease. Recent family studies have been in accord with this observation.

Since familial concentration is commonly observed in contagious, dietary and parasitic disorders, a disease may not be considered hereditary on the basis of a high familial incidence alone. Nonhereditary factors must be excluded, and the operation of hereditary factors must be demonstrated by adequate genetic analysis. Genetic and epidemiologic studies have shown that the primary factor responsible for the familial concentration of rheumatic fever is hereditary susceptibility. In a series of rheumatic families studied it was found that the distribution of cases followed the general laws of inheritance. Furthermore, the frequency of cases was consistent with recessive mendelian inheritance.

These studies were limited to a clinic population in New York City. They indicated that, if environmental factors such as climate, living conditions, diet or bacterial agents were responsible for the onset of rheumatic fever in susceptible children, they were uniformly operative and available. It was found that the number of age-genetic susceptibles estimated in every calendar year over a twenty year period of observation was in close agreement with the number of onsets observed. It was also demonstrated that the intrafamilial pattern of spread of rheumatic fever did not exhibit the usual characteristics of a communicable disease. One case did not constitute an obvious risk for secondary cases in the family. Age susceptibility appeared to determine the time of occurrence of cases in the family. It is important to emphasise that, although the number of genetic susceptibles estimated in these families was found to be in close agreement with the final number of cases observed, it cannot be con-

cluded that every genetically susceptible child will necessarily develop rheumatic fever.

The implications of these observations are apparent. The responsibility of the family physician, paediatrician, cardiologist and clinic is not limited to the medical supervision of the rheumatic patient. A complete family history and adequate physical examination of every member of the family are advisable. When it is ascertained that one is dealing with a potential rheumatic family, instructions as to the nature of the disease and its protean manifestations should be given. Until specific preventive measures have been developed, potential susceptibles should be protected from all known predisposing factors which appear to play a role in the onset of the disease. Since the individual susceptible cannot be identified, all the children in a rheumatic family should be under medical supervision. In recessive inheritance eugenic principles are not applicable, unless perhaps in instances when both parents are rheumatic.

If susceptibility to rheumatic fever is transmitted as a recessive character, the chance for each child (in a family or group of families) to be susceptible may be expressed as follows: If both parents are rheumatic, nearly every child will be susceptible. If one parent is rheumatic and the other parent is nonrheumatic but a carrier, that is rheumatic fever is present among the immediate family, each child has a 50 per cent chance to be susceptible. If neither parent is rheumatic but both parents are carriers, each child has a 25 per cent chance to be susceptible. (If at least one child is rheumatic, it may be assumed that the negative parents are carriers.) If one or both parents are negative, that is definitely known to be nonrheumatic and noncarrier, susceptible children would be unlikely.

The preceding figures may be used to estimate the number of genetic susceptibles present in a family when the genetic constitution of the parents with respect to rheumatic fever is known. If at least one child is known to be rheumatic, the number of genetic susceptibles present in a series of such families may be estimated. Genetic factors have been established which facilitate computation of the number of susceptibles present. It is merely necessary to tabulate the series of families according to family size and multiply each group of families of given size by the appropriate genetic factor. These estimates may then be compared with the actual number of cases of rheumatic fever present in the series.

It is generally believed that the incidence of rheumatic fever is lower in certain sections of the country and infrequent among children of the more favourable economic groups in all sections. Estimation of the role of certain environmental factors may best be made by using the family as a unit for genetic study. For example, if the mortality rates published by the Bureau of Census reflect the relative prevalence of rheumatic fever

in various localities, it would be expected that in family studies in certain mountain states where the mortality rate is high, there would be close agreement between the number of susceptibles estimated and the number of cases of rheumatic fever actually observed. Similarly, in the south Atlantic states, where the mortality rate is reported to be low, it might be expected that there would be a disparity between the number of susceptibles estimated and the number of cases observed. Such comparisons, made on data accumulated from different geographic locations and diverse economic groups, should yield significant information as to the role of climate and environment in this disease.

Of practical importance is the opportunity afforded for evaluating preventive and therapeutic procedure by making a careful genetic selection of families. Since nearly all the children in families where both parents are rheumatic are probably susceptible to rheumatic fever, even a small series of such families would provide a critical experimental group for study. Recognition and observation of the potential rheumatic family offer a promising field for future research in rheumatic fever.

BIOGRAPHICAL NOTES

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HOME TRAINING OF INSTINCTS AND EMOTIONS

By MARGARET RUBEN, *Practising Psycho-analyst*, and RUTH THOMAS, *Senior Psychologist, National Association for Mental Health.*

WE are still inclined to underestimate the enormously difficult and responsible task with which each mother is confronted when she wants to bring up her child satisfactorily. On the one hand she wishes to make her child as happy as possible and tries to fulfil his desire for pleasure, on the other hand she has continually either to restrict his wishes or to direct them into different channels, which were hitherto unknown to the child and became only slowly acceptable to him.

If the mother succeeds in early childhood in fusing together into one entity the instinctual and emotional demands of the child with the social laws of the external world, the child will not only have adapted himself to reality but he will also have become able to take an active and productive part in the tasks lying ahead of him. However, these days mothers are no longer satisfied with chancing " to have a lucky hand " in the upbringing of their children. Welfare clinics, radio talks, educational journals, social workers, nursery teachers—all stress the fact that the educator need no longer proceed on hit and miss methods. Instead in this important sphere, parents and teachers can now in fact draw on an organised body of knowledge in which the development of the child and his problems are clearly described and understood. Nowadays mothers turn into serious students who want to learn as much about the psychological development of their children as they have learned hitherto about their physical welfare.

Child Guidance Through the Parent

A few years ago, after a series of talks about the instinctual and emotional development of children which were given to mothers in a London Infant Welfare Clinic in a working class area, the writers were asked to afford parents an opportunity to discuss their children's problems further in private. The medical officer who had been responsible for arranging the talks subsequently arranged for the borough to employ the psychologist for a three hours session every week. The appointments were arranged through the health visitor or the doctor who together in the course of the afternoon saw some sixty mothers. The psychologist saw

not more than six mothers in a three hours session, averaging an interview of half an hour to each mother.

During the three years the service has been in existence the problems of nearly 130 children have been discussed with their mothers. These included feeding and sleeping disturbances, tempers, masturbation, cleanliness training, severe jealousy cases as well as stuttering. On the average each parent was seen three or four times.

Two Examples

Our way of approach to these problems is shown in the following cases. The mother of two year old Jacqueline complained that for the last three months the child had had violent screaming and vomiting attacks when put to bed at night—she shared the parents' bedroom. Once the parents went to bed she was perfectly all right. She also screamed during her daytime rest when put into her cot. These screaming attacks, besides being an upset for the child, were for many reasons an upheaval of the whole family situation, the mother being a housekeeper in a large house where her husband worked as the chauffeur. Discussion showed that the child seemed to be very well looked after and was not left alone during daytime. It struck us that these attacks had started not very long after the family had moved into this house and that the new surroundings might have activated separation anxiety.

We explained this possibility to the mother and advised her to put the child during the day rest in a room adjoining the kitchen in which she was at work and, instead of putting her into her cot, to let her lie down on a couch so that she could get up if anything should frighten her. At night the mother was advised to sit with the child until she fell asleep. In spite of some doubts the mother carried out these suggestions with the most satisfying results. In the next interview she reported that the screaming attacks stopped entirely, though she had only to sit twice with the child at night time. In this case though the parents quite realised how easily a two year old child can be frightened by being left alone, and were coping well with this problem in the daytime, they had failed to realise that a totally new environment could stimulate the child to unusually strong phantasies, and so aggravate her fear of separation from the parents, in this way upsetting sleeping habits that had already been established.

Margaret's mother came for advice because her seven year old daughter was a severe day and night wetter, taking three to four pairs of knickers to school daily. Margaret always showed considerable shame over the wetting although the parents did not punish her.

The child had had a strict cleanliness training from birth on until she was one and a half, when she was already dry and clean and able to empty her pot herself. This early training broke down a month after it had been completed, when the mother evacuated the child to her grandmother in Belfast and when she herself returned to London to take up again her professional work as a nurse. After this Margaret was dry for one month during which her mother came to visit her in Belfast—about seven months after the original evacuation. After the mother's departure the wetting continued again and was not given up even when six months later the child was taken home to live. The next free period was much later for about two months when Margaret was six years old and the mother had gone with her to Belfast again to give birth to another child.

The emotional picture the mother gave of the child indicated clearly that Margaret was struggling with the problem of jealousy within the family. First of all a considerable jealousy of the baby was apparent. When the baby was danced up and down for a neighbour, Margaret got up and danced too and said, " See, I'll be dancing soon." Lately the baby had been crying in the evening. He was often given his bottle to suck as a comforter and Margaret had taken it away and was sucking it herself. She excused herself on the plea that she had a bad toothache and needed a dummy.

Less apparent, but quite marked to the trained observer, was a certain latent antagonism to her mother. She said that when she grew up she would not put on lipstick as her mother did, as the nuns thought it was not lady-like. In the daytime she often said she would run away from home. The mother humorously told how the child had threatened that she would take her mother's fur coat when she grew up so that the mother would then say " that naughty Margie." Lately Margaret had come into the parents' room at night crying about a bad dream she had had. In this dream, she said, her mother had left her and would not come back any more. On Freud's theory of dream interpretation unconscious hostile wishes go to the making of such a dream. Even though Margaret's affectionate nature was clearly upset by the dream, some part of her unconscious self did indeed wish her mother to go away.

The clue to her antagonism to her mother was revealed when we heard of the child's relation to her father. She seemed to be absorbed in the life her parents had together both in the past and in the present, and in her phantasies she was living her mother's part with all the hostile feelings of rivalry which jealousy creates. This in fact was also the real clue to her jealousy of the baby. It was not so much that she resented the mother's affection for the baby, but she wanted to be the mother and have her father's baby herself.

A Solution

Before coming for advice the mother had by no means been lacking in insight into Margaret's jealousy of her parents' relation and her wish to supplant her mother in her father's affections. But in common with many progressive mothers she thought that if she was lenient to the little girl's rivalry and agreed with her wishes the child would more easily outgrow them. So she promised Margaret her bracelets and rings (presents from the father) and encouraged the child to imagine herself going to parties with her father when she grew up, if only she would be dry. She did not realise that such promises could not but be sexually exciting to the child and this excitement would find its expression in the wetting. Instead of relieving the conflict as she had hoped in this way, she was actually aggravating the child's rivalry.

We suggested that instead she should tell the child of her unconscious aggressive wishes to her mother and the baby—that for instance little girls wanted their fathers to themselves and therefore were angry when mother and father had a baby: often they grew angry with the baby and even wished mother to go away. We suggested she made it clear that it was not possible for little girls to take their mother's place, and that mothers and fathers had a special relationship which little girls could not take away.

In the next interview the mother reported that after her jealousy and aggressive feelings had been pointed out to her the child came to say spontaneously that she did not want to run away any more. Even more important Margaret declared before going to a birthday party that she was not going to wet any more, and in fact the wetting had ceased.

The importance of the change in the child lay in the fact that she had clearly accepted her mother's interpretation of her aggressive wishes, and had recognised the hopelessness of ever being an effective rival. A year later the mother reported that there were no relapses in the wetting and Margaret's development at home and at school had made important advances.

This example also sheds light on the very common bedwetting problem. Perhaps no symptom has so many diverse causes. During evacuation it was commonly attributed to the children's separation from their parents. But the case of Margaret shows how individual and manifold the reasons for this symptom can be. The history suggested that the original onset of the wetting was most likely connected with the child's evacuation and separation from the mother. The symptoms did not however clear up when Margaret came home to live because in her rivalry with her mother and later in her jealousy of the baby and the parents' relationship there appeared a new cause for conflict which found

a ready means for its own expression in the old symptom. In undertaking to advise the mother it was necessary to understand the *present* discontent and deal with this, and not be misled into overemphasising the importance of the original separation anxiety with which the symptom had begun, and which was in fact no longer a problem.

Methods and Principles in Parent Guidance

The method we used in these two short problems recommends itself to us and to the parents because it is adapted to the mother's need for independence. The mother usually answers with a sigh of relief our suggestion that she should herself convey to the child the knowledge and insight we provide. In this way she is imbued with confidence in her own educational ability, and at the same time an atmosphere of mutual appreciation is established between herself and the advisers. In the beginning we usually encourage the mother to make further observations, having brought her to understand both that the problem arises because of some inner anxiety of the child, and that it would be helpful for her to let him know that she realises this. To this more understanding attitude the child usually reacts with an improvement which encourages the mother to come for further discussions. The mother is seldom downhearted when improvement is slow or even when after a time a relapse occurs, because by this time she has grown so interested in the problem that she begins to understand the underlying unconscious reasons for the child's difficulties in solving it.

Not unnaturally mothers are sometimes sceptical at the beginning when we make a suggestion to them which seems for the time being to cut across generally accepted ideas and procedures in upbringing. For example, leaving the child to settle down to sleep on his own and discouraging his last minute talkativeness is ordinarily a good and sensible procedure. One mother, with considerable insight into her child's instinctual and emotional needs, quickly realised, however, how useful it could be to drop this routine when a problem appeared. Her six year old daughter refused once to settle without a night light, saying there was a witch in the corner. " I don't suppose there's really a witch," said the mother, " I think you must be worried over something." The child's reaction was immediate. " Well, Edith did take my pencil and so I had to hit her. I didn't mean to break her old doll and now she'll tell the teacher." " Perhaps to-morrow then," her mother said, " you should take her one of your own dolls and then you'll feel all right again." " Yes I will," the child replied. " Now I don't want a light any longer."

It is in helping the mother to realise where to direct her attention and how to bring the causes of the child's anxiety into the open by her ques-

tions and observations that the adviser has an important function to fulfil.

Parent and Child Develop Together

It is important to anticipate that the mother herself may be resistant to some of the interpretations which we give her, though not to all. For this reason she needs time to think matters over and watch the child's behaviour anew in the light of the suggestions made to her. When the mother decides, on her own account, that the right moment has come to make an interpretation to the child it usually means as well that unconsciously she herself has reached the right frame of mind to give it.

Our experience has shown however that the mother can frequently accept interpretations about the child's instinctual wishes which she would have difficulty in accepting about her own and that sometimes, having accepted them for the child, she is more able to accept them for herself. Once a pregnant mother brought her six year old daughter to the clinic because the child was unmanageable, obstinate and aggressive. The circumstances were such that we thought it advisable for her to explain to the little girl about the expected baby, which so far she had been reluctant to do. We explained to her that children at this age are already thinking over the problem of birth and that the child needed this proof of her love and confidence. (In fact once the mother gave her the necessary explanations the child herself volunteered: "I thought I knew because of the green ration book.") An interview or so after this the mother entered the consulting room and put down a book on the table saying, "Have you read Dr. Read's *Painless Childbirth*? I've wanted to read it for years but never like to ask for it in the library." The mother had not only found it possible to satisfy the child's curiosity by giving the necessary information about sex and childbirth, but in so doing had freed her own suppressed curiosity and allowed it to function usefully.

It is true, that like every human being, parents too have their own psychological problems and also that the parent who is most free of inner difficulties is likely to handle her children's with most wisdom. However the statement that there are no problem children, only problem parents, grossly underestimates the ordinary developmental difficulties of children. Instead therefore of directing our attention to possible faulty approaches which the parent may have made because of her own difficulties, we prefer to attempt to show her the child as an entity with a personality of his own, his own troubles, problems and pleasures, believing that the more we succeed in enriching her knowledge about the child's instinctual and emotional development, the more she will get the necessary emotional detachment from him thus improving her relationship to him and so adding to her power to undertake the subtle task of character training.

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WHOOPING COUGH

By W. Charles Cockburn, M.B., D.P.H., *Central Public Health Laboratory.*

There is a general agreement among historians that whooping cough was first described as an epidemic disease by De Baillou in Paris in 1578. "The lung" he said in his description of the symptoms, "is so irritated that in its attempt by every effort to cast forth the cause of the trouble, it can neither admit breath nor easily give it forth again. The sick person seems to swell up and, as if about to strangle, holds his breath clinging in the midst of his jaws."

In the Bills of Mortality—the early records of deaths and their causes in London—"whooping cough" is first mentioned as a separate item in 1701, when six deaths were ascribed to it. In succeeding years, the number of deaths attributed rose, first to tens and, by 1740, to hundreds annually.

At first sight it would appear from these references that whooping cough—or pertussis, as it was named by Sydenham—arose as a new disease in the sixteenth century, but a more likely explanation is that of Creighton's in his *History of Epidemics in Britain*, when he says that in these early days, the condition was left to the management of "old women and empirics."

Even in less remote times there has been a tendency for the medical profession to dismiss the condition as a relatively unimportant disease of childhood, for although epidemics do occur, they are not often widespread; diagnosis in the early stages is difficult; and no specific cure is available. This last fact is demonstrated by the large number of different treatments which have been in vogue at different periods. At the end of the nineteenth century, for example, one writer discusses fifty-two different drugs (from cod liver oil to chloroform) recommended in medical literature besides such measures as climbing mountains, descending into coal mines, flagellation (practised he hastens to say only in Austria), inhalation of sulphurous acid, vaccination and blistering of the spine.

Early Investigations

By this time, however, the epidemiology of the disease was attracting notice in medical circles. In Aberdeen, for instance, whooping cough was made a notifiable disease for a period of twenty years near the end of the century and, as a result, much valuable information was obtained. It was noted that the infection became epidemic every two years, and

was followed by a measles epidemic ; and, by correlating the number of deaths from whooping cough with the number of rooms in a house, the fatality rate in children living in five-roomed houses was found to be less than one-third of the fatality rate of children in families living in one room.

Since then, the importance of whooping cough as a cause of prolonged morbidity and of death in childhood has been increasingly recognised.

Two out of three children fall victim to this long, debilitating and distressing illness, and many are left lifelong legacies of bronchitis and emphysema. In children up to the age of two years, whooping cough is responsible for many deaths. In fact, more deaths in childhood are ascribed to it than to any other infectious disease.

Workers in this country, Denmark and America have shown that seventy per cent of children suffer from whooping cough before they reach school leaving age. Investigation of the incidence of other infectious diseases over the same period reveals that while more than eighty per cent of children have had measles, only five to ten per cent have had diphtheria (this before immunisation became widespread) and twelve per cent scarlet fever.

The Cause Discovered

Until 1906, the exact cause was unknown, although its infectious nature had long been recognised. In that year, Bordet and Gengou published their famous paper " Le Microbe de la Coqueluche " in the *Annales de l'Institut Pasteur*. It is a report of careful enquiry and detailed observation over many years. They demonstrated that the causal agent was a small gram negative bipolar staining bacillus, and despite many early objections to their findings, their conclusions have now come to be universally accepted.

With the discovery of the whooping cough bacillus, progress in prevention and treatment became possible. Soon vaccines were produced and medical literature just before 1914 contains many reports of their use.

The most hopeful early results were obtained in the Faroe Islands. There whooping cough becomes epidemic every five to six years and, because of the long period between epidemics, the number of ' susceptibles ' is high. In 1923 and again in 1929, there were widespread outbreaks, and vaccination was tried out on a large scale. The attack rate among those inoculated with a whooping cough vaccine was less than among the uninoculated but, what is more important, nearly all the cases among the vaccinated were mild, while most unvaccinated cases were severe, and in the latter group there were many more deaths.

These findings stimulated workers in other countries—especially the

U.S.A. to continue their researches, but the results were disappointing and the vaccines fell into disrepute.

In 1931, Leslie and Gardner, working in this country, discovered that the whooping cough bacillus changes its nature when repeatedly cultured in the laboratory, and becomes non-virulent. Previously vaccines were made from old strains of the bacillus sub-cultured on artificial media time after time, but their work gave a fresh impetus to the preparation of protective inoculations. Most of the investigations since then have been carried out in the U.S.A., where Professor Sauer of Evanston, Illinois, and later Dr. Pearl Kendrick, of Michigan, have been using for some years vaccines prepared from freshly isolated strains of the bacillus. They have records of the result of the injection of these vaccines (usually three injections are given with an interval of four weeks between doses) for many thousands of children, and these records do show that the disease in the inoculated is either prevented or greatly mitigated. As a result, vaccination against whooping cough in America is now widely practised, and lately the vaccine has been combined with diphtheria prophylactics so that prevention of both diseases is attained by one course of injections.

Experiment in England

In this country, investigation has proceeded more slowly, but since 1942 trials have been going on in Oxford, sponsored by the Medical Research Council, in conjunction with the Medical Officer of Health. The first vaccine used—a British product—was, unfortunately, ineffective, and Professor Sauer was asked to supply some of his material for testing here. This second trial has been going on in Oxford now for some time, and the results have led the Medical Research Council to broaden the scope of the investigation using American vaccines as prepared for Professor Sauer and Dr. Kendrick. Shortly, a second British preparation which compares favourably according to laboratory tests with the American types is to be tried out " in the field."

The Medical Officers of Health of Manchester, Wembley, Tottenham, Leeds and Edmonton, are at present co-operating in these investigations.

Briefly, the plan is to inoculate a large group of children between six months and one year old (the dangerous age for whooping cough) ; to keep in close touch with them over the next two years by monthly home visits by a member of the whooping cough team ; and to count the number of children who develop the disease. But the results would be of doubtful value unless the attack rate in the ' protected ' or vaccinated group could be compared with the attack rate in an unprotected group of children of the same age, living in the same environment, and over the

same period of time. It is important too, to compare the *severity* of the disease in the inoculated and uninoculated groups. This comparison depends on the clinical judgment of the doctors concerned with the investigation and it must not be biassed by their knowing to which group —' protected ' or ' unprotected '—any particular child belongs. In each area, therefore, two vaccines designated with a code letter are supplied. They look exactly the same, but one is a whooping cough vaccine and the other is an innocuous preparation. Half the children are inoculated with one vaccine and half with the other, and the ' key ' to the nature of the injections is known only to the Medical Research Council.

In the communities where the investigation is in progress, all details of the plan have been explained to the parents of eligible children. They know that only half the entrants into the scheme receive whooping cough vaccine. But they also know that each child will be visited every month by a member of the special team, and that every effort will be made to diagnose the disease by up-to-date bacteriological methods at the earliest moment so that they can obtain early treatment if it should occur.

The response has been very good. Already 4,000 volunteers are in the trial (not counting those in the earlier Oxford investigations) and it seems that by the end of this year the number will be doubled.

What the Result Will Mean

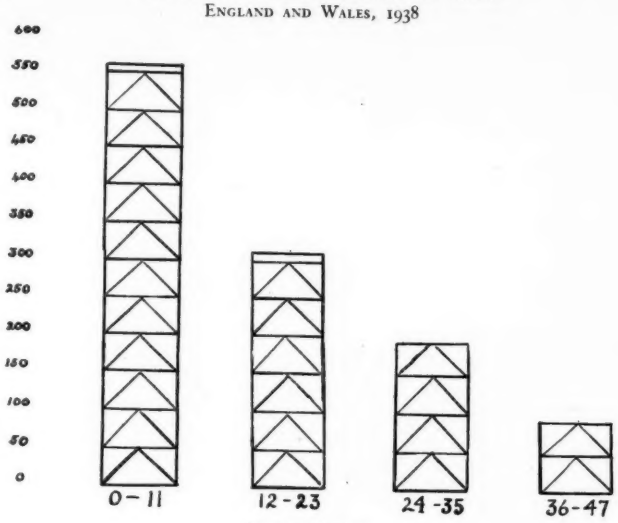
The investigation has been planned as a searching test of the protective value of present-day whooping cough vaccines. The results will not be fully known for two or three years, but at the end of that time, the medical profession should be in a position to say definitely whether anti-whooping cough inoculation is a worth while preventive measure. If the answer is negative or doubtful then more laboratory research for a successful agent will have to be undertaken. If the vaccines are proved to be of definite value, however, and the American opinion is already settled in their favour, we should, in the next few years, see the incidence of this disease falling annually as the incidence of diphtheria has been doing since 1940, when immunisation became general.

BIOGRAPHICAL NOTE

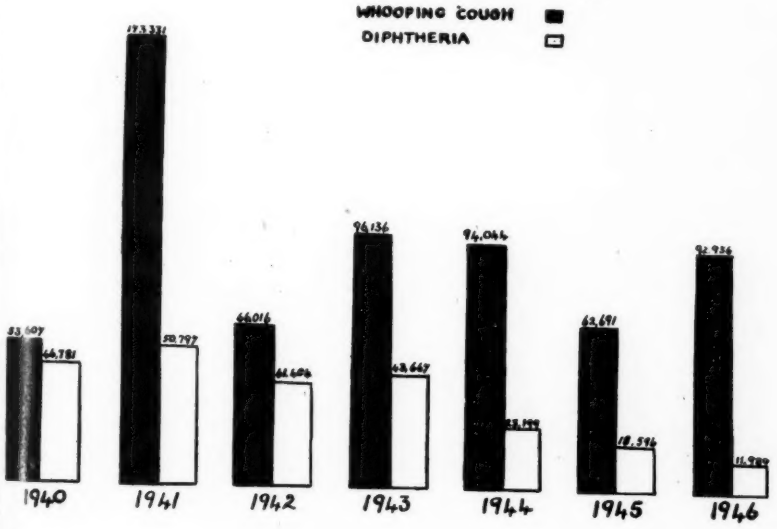
CHARLES COCKBURN, M.B., D.P.H.—Supervisor of the Pertussis Vaccine Trials for the Medical Research Council. Previously D.A.D.M.S. Gold Coast Area, West Africa; M.O. The Industrial Rehabilitation Centre, Horsham. Now at the Central Public Health Laboratory.

WHOOPING COUGH—DEATHS BY AGES

ENGLAND AND WALES, 1938



ANNUAL TOTAL CASES FROM 1940 TO 1946



Scottish Country Dance by Edinburgh School Pupils

Fencing: Students of Edinburgh University

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ORGANISING A HEALTH WEEK

By Henry Ellis, *Secretary and Treasurer, The Scottish Council for Health Education.*

One hundred years ago, statutory recognition was given to the work of Public Health. That recognition was long overdue but who, in 1847, could have foreseen that the Cinderella in the family of public services would, a hundred years later, take the foremost place in the nation's estimation? As each new Act was placed on the Statute Book the puny Cinderella of 1847 grew both in stature and in the extent of her 'wardrobe' until to-day she is clothed in all the splendour and promise of the National Health Service Act. During the intervening century many theories and techniques have had to be rejected or modified but the net result has been an all-round improvement in the well-being of large masses of the people.

Every reasonable person will agree, I think, that this year should not be allowed to pass without some public demonstration of our debt to the pioneers and workers in the field of public health during the last 100 years. Let's celebrate the occasion! But not, please, by holding conferences or meetings of professional people—proposing toasts to their ghostly predecessors—but as a community conscious of its debt to the past and of the promise of greater achievements to-morrow. Why not hold a Health 'Week' to celebrate the centenary of our health services? Let us stir the people to take a greater interest in this most vital of our public endeavours. I address this question particularly to Medical Officers of Health and Directors of Education. In the past, Medical Officers of Health have been almost entirely absorbed in the prevention of *disease*; in the future, in my view, their chief function will be as Health Educators of the community. Indeed, I hope to see, one day, a health education section in every Public Health Department. The educationists, on the other hand, have concentrated too much on intellectual attainments. Both should recognise that, in the past, they largely failed to promote the *all-round* development of the people whose interests they serve.

A Health Week would encourage the whole community to take a more active and intelligent interest in the principles and art of healthy living and would remind everyone that good health is seldom appreciated until it is lost. A Health Week also provides the opportunity for an intensive campaign in health education and would fail if it did not arouse some degree of permanent interest and encourage better habits of personal hygiene. But as a Health Week is not enough in itself plans should be

made to harness the energy released during the campaign for everyday application in school, home, office and factory.

The success of such a venture, whether carried out in a large city, a small town or in country districts, would depend on the attractiveness of the programme provided. Dullness must be avoided ; health education must be conceived as a people's drive for better health and not as an extra-mural department of the medical schools. An attractive slogan should be used, such as " Health with a Smile!" or " Your Very Good Health!" As many activities as possible should be organised out-of-doors, in parks and open spaces, thus underlining the health-giving effects of recreation in the open air. No section of the community should be overlooked and an effort should be made to reach every family in the area ; the best way to do so is through the schools.

Of necessity the Medical Officer of Health must be regarded as the local authority officer most directly concerned in organising a Health Week but he will, naturally, seek the active co-operation of his committee, the Director of Education and other colleagues. The following plan of campaign was prepared and acted upon for the Health Week held in Edinburgh last year and, *mutatis mutandis*, might serve as a basis for similar ventures elsewhere.

Preliminary Plans

The Health Week should be planned for the early autumn. In high summer indoor activities are ruled out and it is difficult to contact the school children ; in winter the weather is too fickle. The organisers should plan a 'Week' of nine days to include two Saturdays and two Sundays and to commence on a Saturday. A provisional programme should be drawn up indicating general meetings, meetings for women, health exhibition, talks in factories, schools, etc., mass meetings, brains trust, V.D. talks, outdoor activities, concerts, etc.

The organising committee should consist of about seven persons: the Medical Officer of Health or Deputy, the Director of Education or Deputy, representatives of the Central Council for Health Education, the Women's Voluntary Services, the British Red Cross Society, and the Central Council of Physical Recreation. It is a good plan to ask the Chairman of the local Public Health Committee to act as Chairman of the Committee. The services of the Area Representative of the Central Council for Health Education are always available in the organisation of health education and it might well be that as Secretary of the Committee, these services could best be used. Each member of the Committee should have one job to do and should be made responsible for its execution and as few meetings as possible should be held.

An estimate should be prepared of the probable cost and there should be a clear understanding as to how it is to be met. (The Edinburgh Health Week cost £1,004.)

Publicity

Press

Small paragraphs (10–15 lines) concerning the 'Week' should be sent to the local papers about three weeks before the opening date. These should be issued

officially through the Public Health Department. Follow up with small paragraphs, perhaps every three or four days, on the various activities planned. These notices should prepare the way for a Pre-Health Week Press Conference at which the Medical Officer of Health should preside and be the principal speaker. Invitations to attend the Conference should be sent to the local Press and to local representatives of the national papers. The invitation should be brief but well set out and should simply invite them to attend for the purpose of hearing the detailed arrangements for the forthcoming Health Week. It is usually a good idea to have a typed statement (one quarto page with about five or six paragraphs) specially and attractively prepared to hand to the Press after the Medical Officer of Health has given the facts verbally. Arrangements should be made, if possible for the Press to have a biscuit and a cup of tea. Women journalists on local papers should be invited to a separate conference.

The time for release of news should be chosen carefully to ensure that no particular paper has the advantage of being able to print the report in advance of the others. At least three weeks before Health Week a suggestion could be made to local papers that it might interest them and their public to have a daily health article, possibly with line blocks of Fougasse illustrations for head and tail pieces. A series of eight articles under very snappy headings, e.g. "Save the Babies," "This Unhappy Breed," "Battle for Health," "Do your Feet Defeat You," "Right Dress," "Just Nerves," etc., should be offered. The Press could be asked to publish a daily diary of events during the 'Week' in addition to their daily news reports. Press photographers should be given every facility.

Broadcasting

If in a regional broadcasting system, an attempt should be made to secure an interview with the News Editor and/or Programme Director. Suggestions could be made for items in the News Bulletin, and in Children's Hour, Broadcast to Schools, and Keep-fit programmes. An eve-of-Health-Week talk and the use of the recording van for outdoor activities might also be arranged.

Schools

The consent and active co-operation of the Director of Education and his staff must be obtained for all work in the schools. The schools provide an opportunity for effective and cheap publicity. The school children are unpaid ambassadors and will take the programme into every family in the area. (An event which proved extremely successful in Edinburgh was a Health Week Quiz for children with popular prizes—bicycle, watch, fountain pen, etc. Thirty thousand entry forms were distributed and 10,000 entries were received. The prizes were given at a mass meeting for youth which lasted nearly two hours and included a health tableau, children's choir, solos, etc.)

Other Methods of Publicity

Banners in chief traffic centres and on railings. Use of kiosks in busy areas. Posters displayed in trams and buses (for two weeks) and in railway stations. Notices in retail shops and factories. Brief announcement over railway station loudspeakers (such as "This is Health Week in Leeds"). Slips for insertion in books issued through the local libraries. Use of loudspeakers in main streets at busy periods in the morning and afternoon. (In Edinburgh considerable attention was attracted by the use of a loudspeaker van.) Exhibition of slides in cinemas. Permission must be obtained from the local Cinematograph Exhibitors' Association for the display of a slide in every cinema. The managers of cinemas should be contacted and their co-operation assured before approach to the Association. Useful co-operation could be obtained from the local office of the Ministry of Labour (who would supply lists of firms with more than 500 employees) and the Citizens' Advice Bureaux.

Material

The 'piece de resistance' of the Week should be the Health Week programme for which Fougasse illustrations should be used. A cheaper edition of the programme should be prepared for issue to the very young children in the schools, and through factories and shops. The unique publicity value of Fougasse illustrations should always be borne in mind. Enlargements and cut-out drawings of many of them, could be made and used in shop windows and on public hoardings. A wide range of posters of all kinds should be issued as well as posters advertising the various meetings and activities. Lantern slides should be prepared for display in cinemas, etc.

Programme

Schools

Five-minute health talks after morning prayers, every school-day during Health Week. Out-door demonstrations—physical training, games, dancing. Youth demonstration including a concert and health tableau. The tableau should depict a word or phrase in connection with the 'Week' for instance "Health can be Fun!" Cut-out letters about two feet high should be used. The children should perform a suitable tableau for each letter—H for habits, E for exercise, A for attire, L for leisure, T for temperance, H for happiness. A good commentator is essential. Meeting of the Parent-Teacher Association.

Cinema Shows and Meetings

Film shows for senior school pupils. Five-minute health talks at the regular performances at Cinema Junior Clubs, preferably with blackboard or other illustrations or a health film. General Health and V.D. meetings in cinemas at which arrangements could be made for cards for questions to be issued to the audience and collected during the interval. Meetings for women, with speakers on different subjects. Health film shows in a public hall with a doctor to answer questions daily, say at 2–3 and 4–5 p.m. Talks at Maternity and Child Welfare Centres.

Outdoor Events

Displays of dancing and gymnastics by school children, students, police, youth service. Open-air demonstrations arranged by the Central Council of Physical Recreation, including keep-fit exercises, ballroom dancing, wrestling, Sicilian and Portuguese dancing, netball, basketball, skipping, English folk dancing and Scottish country dancing. Short 'snappy' talks by "The Open-Air Doctor."

Exhibitions

Although there is still a shortage of suitable material, good and effective exhibitions could be arranged, for instance Wise Meals, Feeding the Toddler, Posture, Care of the Feet, Mass Radiography Unit, Sanitation, Housing, linked with the work of the various departments of the local authority.

Churches

Talks and/or announcements from the pulpit.

Panel of Speakers

A very careful choice of speakers should be made. The panel should consist of experts on all aspects of health education and, if possible, a doctor with a flair for popular exposition of medical and health topics.

NOTE.—*All reproductions of work by Fougasse are subject to his approval.*

Conclusion

The programme suggested above may seem very formidable but a centenary celebration should be done well or not at all. Surprisingly, the campaign in Edinburgh, last year, required only six weeks of preparation but, generally speaking, a longer period is desirable if the full programme, as outlined, is to be carried out. Many of the items are, of course, impracticable for the smaller public health authorities (and for country districts) but each Medical Officer of Health can decide for himself how much should be attempted.

In conclusion I must quote a casual remark once made by the late Sir Almroth Wright at a discussion following a lecture given by Bernard Shaw. He said: "I believe the effect of sanitation is aesthetic." In these words he revealed what I believe to be the true purpose of all health education—the attainment of what is beautiful in mind, body and environment. Health Weeks will be worth-while ventures if they stir our aesthetic feelings so strongly that we shall refuse to tolerate dirt, ugliness and disease.

BIOGRAPHICAL NOTES

HENRY ELLIS.—Secretary and Treasurer, Scottish Council for Health Education since 1944. Previously General Secretary, Scottish National Council for Refugees; Organising Secretary, Scottish Committee of the Empire Exhibition 1938. Edited, managed and published several magazines of interest to Scouts.

W. S. WALTON, G.M., M.D., B.Hy., D.P.H.—Medical Officer of Health and Principal School Medical Officer, Newcastle upon Tyne. Formerly Medical Officer of Health and School Medical Officer, West Bromwich. Has held appointments as Deputy Medical Officer of Health at Plymouth and Middlesbrough. Lecturer in Public Health at Durham University. President of County Borough Group, Society of Medical Officers of Health, 1946–1947.

R. DOBBIN, D.P.A.—Public Relations Officer, Health Department, Newcastle upon Tyne. For many years has been responsible for organising local health educational work. Has developed public relations along original and practical lines. Finds contacts established as Liaison Officer to the Mass Radiography Unit very useful in establishing relations with commercial and industrial organisations, and voluntary groups.

Hlth. Educ. J., 1947, 5, 134—137

THE ELEMENTS OF FOOD EDUCATION

By F. Le Gros Clark, M.A., *Hon. Secretary, Children's Nutrition Council. Editor, Nutrition Bulletin.*

However else we may choose to define life, it is certainly a continuous and complex interchange of chemical substances. The inflow consists of oxygen, water and what we may call the *dry matter* of our food. It is the securing of this *dry matter* that has always given us such a deal of inconvenience.

Man differs from the other animals in that he alone has made a historical process of his stay on earth. He was enabled to do so through his ingenious discovery that the soil could be persuaded by cultivation to yield a considerable store of edible grains. In short, he became a farmer. That released him in some measure to engage in pursuits other than the tedious search for food, to which the waking life of animals is mainly subjected. In theory, man might have advanced much further along the path of self-enfranchisement from the stomach ; but the fact is that he did not.

Trial and Error

Now, we might imagine that man could have been provided with some instinct that impelled him to make the securing of his food as simple a process as possible, as simple and as elementary, indeed, as is the securing of oxygen and water. But he possessed no such instinct. On the contrary, he seems almost to have exerted himself to make matters more difficult than they need have been. The fact that he was more or less omnivorous from the start gave him, of course, certain obvious advantages in the struggle for survival. He could adapt himself to changing food supplies ; and his range of migration was very wide. Since he could make use of a *mixed* diet, he was able, after a period of trial and error in any new habitat, to acquire food habits that were at least fairly satisfactory.

But this process of trial and error is only effective for man while he is still a primitive food-gathering creature. It pre-supposes that the community has free access to all the available sources of food supply. Once the free access has been broken, the ability of man to eat anything that is edible may be converted into a positive disadvantage. The primitive safeguards no longer operate ; and man is at the mercy of his own whims, traditions and theories.

We have, for example, in the course of history rationed large communities of men, either by forcing them into slavery or by restricting

their power to purchase food. They had relatively little chance of selection ; and as a consequence their capacity to eat whatever they could obtain implied that their diet might for generations be thrown more or less seriously out of balance. No one was much the wiser, because the natural operation of trial and error had been almost entirely suspended ; and it had not been replaced by scientific vision. Again, the growth of urban communities meant that an increasing proportion of food reached the consumer in a prepared and processed state ; it was transported, stored, milled, refined and adulterated. No one inquired what effect this had upon the substance or the nutritional value of the food. Yet it is now evident that the modern science of nutrition has in great part emerged from the very fact that so large a proportion of foods no longer reach the consumer in their raw and natural condition.

The Natural Trend

There may be some risk of exaggeration in what I have just said ; man has found countless other ways of laying up dietetic trouble for himself. But in the main the ills of urban civilisation are those that here concern us. Now, there is a common belief among those who work in the field of applied nutrition, that most people *tend* to adopt a good *mixed* diet, where the food is made available. They may take some time in reaching a thoroughly satisfactory pattern of consumption ; but they will, it is assumed, be led towards it by their natural tastes and the influence of social fashion. I am not sure that this has ever been put to a scientific test. But it is an attractive theory ; and it can probably be argued with conviction. If it be true, then clearly the work of the educator is less that of teaching his grandmother how to suck eggs than that of dispelling any outworn illusions in the matter of eggs that have in the course of generations obscured her natural taste for the food. The removal of misconceptions and prejudices may be as arduous a task as that of imparting new ideas ; but at least the educator is working with the current of natural inclination ; time and the gastric juices will be on his side.

Diet and Superstition

Any community, even an advanced urban community that is restricted in its choice of food, tends to adapt itself to its life of austerity by mingling its food habits with ritual, taboo and superstition. We have, therefore, to struggle with the heritage of the past. The real problem let me repeat, is the persistence of outmoded theories and superstitions. Too many of our fellow men have been too long restricted to a relatively poor and monotonous diet. The original sin of our species, dietetically speaking, was less that it was tempted to vary its diet with an occasional

apple than that it has made a desperate effort to live by bread or rice alone.

The remedy is probably simple enough. As far as I can see, it has a threefold application. In the first place, supplies must by all means be sufficient. Our present miseries are a warning to us of that. For in any case without a guarantee of supplies the educator can achieve little ; at best he may attempt to forestall the extreme of disaster. Only in a varied and well-stocked market can the habit of variety be fostered.

Secondly, a civilised community can never escape from the necessity of having most of its food transported, preserved, processed and refined. Our only cure for the ills of civilisation is by becoming still more civilised. The community has to be protected by inspection and by regulations affecting the quality of manufactured or processed foods. No modern government can really evade the duty of establishing such an inclusive guarantee of the foods that reach the consumer ; and here the task of the educator is patently that of making the public aware of what its team of specialists and inspectors are doing on its behalf.

So much for the supply problem, which is primarily an affair of farmers, and the administrative problem of the guarantee of quality which is an affair of governments. The rest lies within the province of the educator. My own view as I have said, is that we should concentrate less on commending various foods to the public than on working to remove from their minds the mistaken and outworn ideas that still survive. We have of course to discover what these ideas are, and to assess them with care and sympathy. So far as we may, we should understand their historical and social origins ; and when we have understood we should apply our remedies with imagination. By all means let us present the foods in an attractive form ; there is no excuse for foods that are unappetising or that obviously do not suit the public taste. But once we have found our method of presentation, we need do no more than work away at the accumulated undergrowth of doubt and superstition.

The Task of the Educator

Let us view the question with philosophic detachment. Man was endowed with no instinct that could guide him in the choice of food, with no instinct that impelled him to rid himself as expeditiously as possible of the curse that he should in the sweat of his brow seek his daily sustenance. As a race, we still spend an inordinate amount of our collective energy in the cultivation of the soil. It is said that more than 66 per cent of the world's work has to be consumed in the production of food. How much further is consumed in the process of transporting, refining and cooking the food, we can scarcely venture to guess. All

this we do merely that we may absorb so much *dry matter* in the form of food. Surely it is time we began to think rationally about this elementary process, which has, after all, but slight cultural and spiritual significance. It is not our business, as educators, to preach more austerity than we need ; but so far as we can relieve the farm worker and the housewife of their excess burden we are, I think, entitled to take a somewhat austere and dispassionate view of the whole affair.

Our assumption is that the human taste will lead most men to adopt in time a sufficiently varied and wholesome diet, provided only that the foods are made available to them and that the foods are not over-refined and adulterated in their passage to the meal table. But we allow that in the course of history men have attached to food an emotional significance, amounting in some cases to a religious taboo ; and our own task is simply that of reversing the process and gradually purging the human mind of the accumulated dross of centuries.

BIOGRAPHICAL NOTES

F. LE GROS CLARK, M.A.(Oxon).—Hon. Secretary to the Children's Nutrition Council. Editor, *Nutrition Bulletin*. Engaged during war under a Leverhulme Research Grant on study of social aspects of the communal meal schemes. Author of a number of reports and publications on the economic and administrative problems of nutrition in this and other countries.

Mrs. MARGARETE RUBEN.—Studied psycho-analysis in Berlin 1933–36 ; practising psycho-analyst in Italy until 1939, from then in London. Published in *The Psychoanalytic Study of the Child* "A Contribution to the Education of a Parent."

Miss RUTH THOMAS.—Educated Sydney University. Lecturer on Education, St. Gabriel's Teachers' College, London, 1933–37. Fellow in Psychology, London Child Guidance Clinic. Senior psychologist to National Association for Mental Health. Publications: pamphlets to parents on problems of young children and *Homeless Children* (N.A.M.W., 39, Queen Anne Street).

RALPH WILLIAM PICKFORD, M.A., Ph.D.(Camb.), D.Litt.(Glasgow).—Educated at Bournemouth School and Municipal College. At Emmanuel College, Cambridge, was an Exhibitioner, Scholar and Internal Research Student. Studied biology and psychology. Lecturer in Psychology at Glasgow University since 1930. Author of papers on experimental, social and clinical psychology.

Hlth. Educ. J., 1947, 5, 138—141

SECURITY, PROPERTY AND POSSESSIVENESS

By R. W. Pickford, M.A., Ph.D. (Camb.), D.Litt.(Glasgow), *Lecturer in Psychology, Glasgow University.*

In working out a theory of the nature of possessiveness and its social implications, two very important considerations have to be borne in mind. Firstly, we have to think of the immense flexibility or plasticity of human beings in comparison with other animals during their development. No human individual, except perhaps a very young infant, before its life has been affected to any extent by the environment, has experience of instinct in its crude and elementary form. Instincts are rapidly combined and subjected to repression and transformed into the habitual responses of childhood and maturity. In addition, man is endowed by heredity with intelligence far greater than that of the highest of the other animals, and this itself undergoes a characteristic and gradual development up to the age of about fifteen years. This long period of development, in which the plastic instincts are modified and intelligence grows year by year, puts man into a position wholly different from that of any other animal. It gives him childhood and adolescence in addition to infancy, and opens the way for all his cultural and social developments.

The Dependency of Man

The second essential consideration is the dependency of the infant, child, and adolescent which this long period of human development brings about. Most other animals, if not born with a marked degree of independence, undergo a much more rapid development towards maturity, but man is born singularly helpless and takes a very long time, almost one third of his whole life, to mature. This dependency greatly intensifies the need for security in human infants and children, and is invariably carried over into mature life to a greater or less extent. The need for security, first directed towards the mother, is later transferred in part to the father, and forms the basis of a series of complex psychological changes which have been considered in detail by the psychoanalysts. The infant overcomes the need for parental protection by finding a modified security in a thousand other ways, social, economic, political, religious, artistic, and scientific. Human beings are different from other animals in their retention throughout life of the persistent effects of this need for security. The political, economic, religious, and social conflicts which entangle him in maturity are based only in part

upon rational necessities. They are constantly affected in unconscious ways by unresolved infantile and childish demands of an irrational nature.

In the last fifty years many psychologists have considered important ways in which the dependency of the human infant is intensified, and by which, in turn, the possessiveness of the adult is rendered more irrational and difficult to control. It is commonly agreed that the frustrations incurred even quite unintentionally during suckling and weaning on the one hand, and during bowel and cleanliness trainings on the other, have a predominant effect on subsequent mental balance. Loss of a parent during these critical years, or even lack of harmony between parents, may have incalculable repercussions on the infant's subsequent development. When exaggerated in certain ways the intensified dependency may lead to the persistent need of the hysteric to parade his incapacities, or to that of the hypo-manic to dominate every situation with his overpowering self-confidence. The melancholic abandons hope, but the paranoid advances upon society with curiously mingled aggressiveness and suspicion. The schizoid sinks into a secondary infantility, but the obsessional continually goads himself and others into a pathological efficiency. Psycho-analysis has dealt in detailed ways with the different forms of morbid dependency of neurotics and psychotics, and they cannot be explained fully here. In many, if not in all, normal persons there are similar morbid streaks, but not in a degree so marked as to interfere with daily life. Those who are specifically abnormal are the extremes, but the variability runs through the whole population.

Security and Aggressiveness

It is a very common condition for the need for security to be complicated by aggressiveness in various ways. The infant, perhaps fearful of losing the mother's protection, unintentionally tests her out by some form of annoying behaviour, to prove that there is no risk of her going against him. The mother, irritated by the child, is offended and perhaps beats it in order to teach it a lesson, thus unintentionally proving that its fears were well grounded. The child may then become suspicious of adults, and may suffer from a mixture of feelings of inferiority and aggressiveness towards society throughout its life. Aggressiveness may be linked with the need for security when it takes the form of the impulse to do away with a rival, and in many other ways which cannot be explained here in detail.

Many psychologists have thought that frustrations by adults, often unintentional and unavoidable, or various forms of privation in infancy are always the causes of exaggerated feelings of insecurity and possessiveness in the child and later in the adult. While better methods of upbringing, which involve more freedom and less arbitrary control and frustra-

tion, would certainly lead to happier development of children, it seems that much of the original trouble lies in the world of fantasy rather than in realities. It is less important that a child should be frustrated in reality than that it should form fantasies of frustration which are of a disturbing character. Often it is far from clear why disturbing fantasies should be formed, especially when they are quite at variance with reality. The control of fantasies is far more difficult than of realities, though much valuable help is being given to-day in child guidance clinics. It is, however, unlikely that the complications of the need for security which upset daily life will ever be altogether reduced by avoidance of real frustrations, either in childhood or in maturity.

Possessiveness—In Infancy and Maturity

Economics would be a rational science but for the irrationalities of infantile reactions which persist into the lives of adults as unconscious impulses. Suttie has expressed this irrationality by saying that the individual is often impelled to establish security (in his infancy) by preventing others from getting as much of any possession as he has ; by getting more for himself than others have ; or by wanting things and getting possession of them simply because others possess, want, or value them. The capitalist secures himself by getting more than others ; the communist by preventing others from getting more than he has, even if this means that nobody shall own anything. Ultimately their unconscious aims in terms of the fantasy of security are the same, but their methods are quite irreconcilable. The irrationality of the impulse towards security may be seen when it is realised that many people need the reassurance of amassing possessions until they are almost a burden, while others find a similar reassurance in giving away everything they possess. No simple laws of economics operate in the fantasy-world of the unconscious.

Susan Isaacs has shown that sharing is one of the hardest problems to children under five. It is, in fact, almost impossible, unless a disinterested adult is present to insist on fairness. Adults find sharing very difficult too, and it is easy to see that many aspects of the laws about property and possessions are simply public defence-mechanisms against the dangers of sharing. In this connection consider, for instance, the heavy penalties against sharing of husbands and wives.

The possessive child has substituted other objects for its mother, and cannot give them up without endangering its sense of security. Alternatively, it may be protecting itself against a rival brother or sister, against a fantasied rival, or against the father as a rival to its claims on its mother. In adult life there is a constant struggle between individuals over positions and possessions of all kinds, and it is based on unresolved possessive

attitudes developed in infancy. The idea that competition is the foundation of progress and civilisation may be largely a rationalisation of infantile impulses, and the social reformer has the problem of converting Western society to the idea that co-operation is more important than competition. If economics and politics are condemned to failure as rational pursuits, it will not be owing to their own essential nature but to the inroads of infantile attitudes which are being played out in adult life.

Conclusion

It would appear then that human possessiveness is potentially a normal sentiment, based on biological instincts, and that it may be expected to vary greatly in different cultures and societies, as in fact it does. Such a sentiment in man, like other sentiments, is the product of experience, and depends on his great plasticity and long immaturity. This long immaturity in turn sets up the enormous need for security which is specially human and which vastly intensifies the dependence of child upon parent. Many frustrations and privations in infancy and childhood also tend to exaggerate this dependency, and result in its being greatly complicated with aggression. Fantasied frustrations and privations may be even more powerful than real ones, and it seems unlikely that the effects of exaggerated possessiveness will be completely abolished by the removal of real frustrations. Meantime economics is constantly undermined as a rational science by the irrational features of human possessiveness.

FOOD AND DRINK INFECTIONS

Food and drink infections kill over 5,000 people in this country each year. Most of these deaths are avoidable and the Central Council for Health Education believes that health education could help to prevent them.

The Central Council has therefore decided to hold a One-Day Conference of representatives of local authorities in England, Wales and Northern Ireland. Distinguished speakers will examine the nature of food and drink infections, their causes and the special contribution that health education can make to the solution of the problems that arise. As a basis for discussion there will be outlined the possible action that could be taken by individual local authorities to tackle the problem.

The conference will take place at Friends House, Euston Road, London, N.W.1, on Thursday, the 9th October, 1947.

FILMS

A MODERN GUIDE TO HEALTH (1946). 35 mm. and 16 mm. Sound. C.O.I. for Ministry of Health in collaboration with the Central Council for Health Education. 9 minutes.

This film deals with the subject of commonsense health rules, and offers suggestions on how the public's health may be improved. In particular it describes the evils of bad air in towns and cities, the results of slovenly posture, and points out the value of healthy relaxation. Although this film is presented in cartoon form and the treatment of the subject is humorous, the lessons and advice are both serious and sound.

RETURN TO ACTION (1947). 35 mm. and 16 mm. Sound. A Merlin Film production. C.O.I. for the Ministry of Labour. 20 minutes.

Deals with one of the most urgent of all post-war problems: the rehabilitation of the disabled. The film shows how disabled men and women are helped by the Disablement Resettlement Officers to return once more to skilled or other useful employment, with the co-operation of Industrial Rehabilitation Centres, Residential Training Colleges and Government Training Centres.

TRIUMPH OVER DEAFNESS (1946). 35 mm. and 16 mm. Sound. A Data Film production for the British Council. 20 minutes.

This film shows how, until recently, deaf children were almost dumb because they could not hear any sound to imitate. Now they are sent to special free schools where they are taught to speak and to use what hearing they may have, augmented with hearing aids. The methods by which this is achieved are ingenious and imaginative. This treatment is superseding the use of finger language and encourages the sufferers to mix more freely with other people, and to grow up as normally as possible.

BRITAIN CAN MAKE IT, No. 16. (1947). 35 mm. and 16 mm. Sound. C.O.I. for the Ministry of Supply. 10 minutes.

This is one of a series of monthly films, made for the Ministry of Supply, for distribution in factories. Fourteen million man days a year are lost to industry in Britain through the common cold. At Salisbury, an experiment is being carried out to find a means of successfully combating the cold virus. At this centre, volunteers from all over the country have undergone tests, the results of which, it is hoped, may eventually help to solve this great problem.

PAPWORTH VILLAGE SETTLEMENT (1945). 35 mm. and 16 mm. Sound. World Wide Pictures. 19 minutes.

At this village community tubercular patients are not only assisted to regain their health, but are trained for suitable light work in the Settlement's factories, where they can earn a living without fear of loss of employment owing to their disability. Many patients are able to live in separate houses with their families.

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BOOK REVIEWS

THE ROAD BACK TO HEALTH, issued by the Ministry of Health. (H.M.S.O. 1947. Pp. 28. Illustrated. Price 6d.)

Much trouble has been expended on *The Road Back to Health*. This can be deduced from the clarity with which it is written, and the catholic outlook in which it is presented. Most works on rehabilitation are written by specialists or, at least, by enthusiasts in one aspect of the subject or another, so that a distorted view of the problem is given. Rehabilitation, or restoration to maximum efficiency, embraces the physical, psychological, social, environmental and economic moieties, and therefore demands the study of the whole man. It is one continuous process, beginning at the moment of the patient's disability and is completed only with his reinstatement in an occupation demanding his full resultant capacity. It is required with equal cogency in every form of medical and surgical ailment; yet the methods to be employed must vary not only with the type of disability, but also in studied relation to each individual concerned. In this booklet, all these points, together with suggestions for planning in the future, are set out in a clear and simple way.

F. D. HEWITT.

AN APPROACH TO SOCIAL MEDICINE, by John D. Kershaw, M.D., D.P.H. (Baillière, Tindall and Cox. 1946. Pp. 329. 15s.)

This book is important because it is written by a Medical Officer of Health and therefore presents the reflections of one who in the course of his duties has come into intimate contact with the affairs of the community and with those problems, partly medical partly sociological in nature, which for their solution demand adequate social action. Up to the time of the appearance of this book those who had written on Social Medicine and had attempted to give to this subject a definition had been in the main clinicians. It was natural, therefore, that these should have assumed that Social Medicine was a development within and an expansion of their own particular branch of medicine. The author approaches the subject from an entirely different angle, that of a medical man who as Medical Officer of Health has been made aware of the fact that medicine is a social science and that to a very considerable extent legislative action is based upon medical recommendations.

First of all he offers a brief account of the anatomy and physiology of society. Next he gives to medicine the place which in his opinion it should occupy in the modern society. Thereafter he discusses the progressive development of the major branches of medicine in relation to social activities and the most urgent health problems which have been created as a result of the aggregation of human beings into organised societies.

This book is strongly recommended not only to members of the medical profession but also to the teacher, the local government officer, in fact to all who are in their various ways concerned in the preservation and promotion of health of mind and body in a society such as ours. It will surely serve to show how, as a result of the interplay of medicine and the social sciences, the emphasis in medicine has been changing and also to indicate how medicine is being used and can be used by society as an instrument of social policy.

F. A. E. CREW.

FATHERLESS CHILDREN. Contributions by: Susan Isaacs, Joan Riviere and Ella Freeman Sharpe. (New Education Fellowship. 1946. Pp. 29. Price 1s. 6d.)

Tiresome though the repeated statement in each of these essays of Freud's Oedipus theory may be, yet the overall practical experience of the writers contributes much of great value to those who deal with orphaned children. It would have been better to have stated the common theoretical background of the writers in an introduction; this would have saved much wearisome repetition. The essayists are Freudians all; if by design, in the interests of consistency, then this should have been stated in a foreword; if not, then the New Education Fellowship, the sponsors, might perhaps have deliberately inset a non-Freudian article to give the total work a more balanced perspective.

I. FROST.

ABNORMAL BEHAVIOUR, by R. G. Gordon, M.D., D.Sc., F.R.C.P. (Edin.). (Medical Publications, Ltd. 1946. Pp. 75. Price 5s.)

Intended for workers dealing with difficult children and delinquent adolescents, this small book covers some theoretical and many practical aspects of the subject. The language is simple though the subject matter would easily lend itself to the obscurities of technical jargon.

After a review of normal patterns of behaviour, there follows a discussion of abnormal types, defence mechanisms, mental defect and asocial behaviour. Lying, bedwetting, homosexuality, stealing, irresponsibility, destructiveness and other common phenomena met with among 'difficult' children and asocial youth are dealt with in a helpful way.

Leadership, discipline and the relationship of the individual to the community are discussed under 'treatment' with the emphasis upon re-education and rehabilitation.

Written by an acknowledged authority, this book forms an invaluable guide to social workers and teachers.

I. FROST.

HEALTH AND SOCIAL WELFARE, 1947. Advisory Editor, The Rt. Hon. Lord Horder. (Todd Publishing Co., Ltd. 1946. Pp. 528. Price 25s.)

The new edition of this annual reference book is larger than its predecessors and its value is considerably enhanced by the addition of an index. The main sections have been revised and, though reduced in number, all aspects of health and social welfare are embraced by special articles and official or unofficial statements. The directories, statistical tables and particulars of Government and voluntary organisations are most useful. As is inevitable in most books of reference, however, certain details are out-of-date at the time of publication. The book is attractive in lay-out, has clear type and, above all, is authoritative.

A. J. MANTRIPP.

CONDITION OF THE BRITISH PEOPLE. A series of six wall charts, with speaker's notes, discussion points and 'quiz.' (Research Services, Ltd. 1946. Price 18s.)

These excellent charts, on stiff paper each 29 in. by 40 in., are printed in six colours and are of the isotype variety. They should be of great assistance to lecturers and teachers of social biology, as well as to informal discussion groups. The topics covered are population, standard of living, condition of houses, distribution of income and wealth. The handbook is interesting as well as utilitarian.

P. M. TAYLOR.